

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A data protection processing device that encrypts a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers, the data protection processing device comprising:

a determination unit that determines whether the first byte indicates a first value; and

a calculation unit that performs, using a second value, an arithmetic operation on the M second bytes when the determination unit determines that the first byte indicates the first value.

2. (Previously Presented) The data protection processing device according to claim 1, wherein the arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1.

3. (Previously Presented) The data protection processing device according to claim 1, wherein the first value, the second value, the M and the N are stored in the data protection processing device to be rewritten from the outside.

4. (Previously Presented) The data protection processing device according to claim 1, further comprising:

a first buffer that temporarily stores a plurality of bytes to be read out by the determination unit, the plurality of bytes being obtained from the bit stream by bit-to-byte conversion; and

a second buffer that temporarily stores the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the arithmetic operation.

Claims 5. - 6. (Canceled).

7. (Previously Presented) The data protection processing device according to claim 1, further comprising:

a receiving unit that receives, from another data protection processing device, another bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes;

a second determination unit that determines whether the third byte indicates the first value; and

a second calculation unit that performs, using the second value, a second arithmetic operation on the M fourth bytes when the second determination unit determines that the third byte indicates the first value.

Claims 8. - 9. (Canceled).

10. (Previously Presented) A modem device comprising:

a data compression unit that performs data compression and outputs a compressed bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers;

a first determination unit that determines whether the first byte indicates a first value;

a first calculation unit that performs, using a second value, a first arithmetic operation on the M second bytes when the first determination unit determines that the first byte indicates the first value;

a transmitting unit that transmits the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the first arithmetic operation;

a receiving unit that receives another compressed bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes;

a second determination unit that determines whether the third byte indicates the first value;

a second calculation unit that performs, using the second value, a second arithmetic operation on the M fourth bytes when the second determination unit determines that the third byte indicates the first value; and

a data decompression unit that performs data decompression on the third byte, the N intermediate bytes, and the M fourth bytes that have been subjected to the second arithmetic operation.

11. (Previously Presented) The modem device according to claim 10, wherein the first arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1, and

the second arithmetic operation is an addition when the first arithmetic operation is the subtraction, and a subtraction when the first arithmetic operation is the addition.

12. (Previously Presented) The modem device according to claim 10, wherein the first value, the second value, the M and the N are stored in the modem device to be rewritten from the outside.

13. (Currently Amended) A data communications system comprising:
a data transmitting device that encrypts a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers; and

a data receiving device receives an encrypted bit stream from the data transmitting device,

wherein the data transmitting device includes

a first determination unit that determines whether the first byte indicates a first value; and

a first calculation unit that performs, using a second value, a first arithmetic operation on the M second bytes when the first determination unit determines that the first byte indicates the first value, and

wherein the data receiving device includes

a second determination unit that determines whether the first byte indicates the first value; and

a second calculation unit that performs, using the second value, a second arithmetic operation on the M second bytes when the second determination unit determines that the first byte indicates the first value.

14. Canceled.

15. (Previously Presented) The data communications system according to claim 13, wherein the first arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1, and

the second arithmetic operation is an addition when the first arithmetic operation is the subtraction, and a subtraction when the first arithmetic operation is the addition.

16. (Previously Presented) The data communications system according to claim 13, wherein

the first value, the second value, the M and the N are stored in each of the data transmitting device and the data receiving device to be rewritten from the outside.

17. (Previously Presented) A data protection processing method of encrypting a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers, the data protection processing method comprising:

determining whether the first byte indicates a first value; and

performing, using a second value, an arithmetic operation on the M second bytes when it is determined at the determining that the first byte indicates the first value.

18. (Previously Presented) The data protection processing method according to claim 17, wherein the arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1.

19. (Previously Presented) The data protection processing method according to claim 17, wherein the first value, the second value, the M and the N are stored in a rewritable memory to be rewritten from the outside.

20. (Previously Presented) The data protection processing method according to claim 17, further comprising:

temporarily storing, in a first buffer, a plurality of bytes to be read out at the determining, the bytes being obtained from the bit stream by bit-to-byte conversion; and

temporarily storing, in a second buffer, the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the arithmetic operation.

Claims 21. -25. (Canceled).

26. (Previously Presented) The data protection processing method according to claim 17, further comprising:

receiving another bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes;

determining whether the third byte indicates the first value; and

performing, using the second value, a second arithmetic operation on the M fourth bytes when it is determined at the determining that the third byte indicates the first value.

Claims 27. - 34. (Canceled).

35. (Currently Amended) The data protection processing device according to claim 1, wherein, when the first byte indicates the first value, the M second bytes correspond to an adding range, the first byte corresponds to an adding condition, and the second value corresponds to a protection key value.

36. (Currently Amended) The data protection processing method according to claim 17, wherein, when the first byte indicates the first value, the M second bytes correspond to an adding range, the first byte corresponds to an adding condition, and the second value corresponds to a protection key value.

37. (New) The data protection processing device according to claim 1, wherein the calculation unit does not perform the arithmetic operation on the N intermediate bytes when the determination unit determines that the first byte indicates the first value.

38. (New) The modem device according to claim 10, wherein the first calculation unit does not perform the first arithmetic operation on the N intermediate bytes when the first determination unit determines that the first byte indicates the first value.

39. (New) The data communications system according to claim 13, wherein the first calculation unit does not perform the first arithmetic operation on the N intermediate bytes when the first determination unit determines that the first byte indicates the first value.

40. (New) The data protection processing method according to claim 17, wherein the arithmetic operation is not performed on the N intermediate bytes when it is determined at the determining that the first byte indicates the first value.